

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554**

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In the Matter of	)	
	)	
Amendment of Part 2 and 15	)	ET Docket No. 94-124
of the Commission's Rules to Permit	)	RM-8308
Use of Radio Frequencies Above 40	)	
GHz for New Radio Applications	)	

**COMMENTS OF ROCKWELL INTERNATIONAL CORPORATION**

Pursuant to Section 1.415 of the Federal Communications Commission ("the Commission") Rules and Regulations, Rockwell International Corporation ("Rockwell") hereby submits an original and nine copies of Comments on the Notice of Proposed Rulemaking ("NPRM") regarding Amending Parts 2 and 15 of the Commission's Rules to Permit Use of Radio Frequencies Above 40 GHz for New Radio Applications.

**INTRODUCTION**

Rockwell is a diversified high technology company that manufactures a wide variety of communications equipment for the fixed, mobile and satellite services. Rockwell is also a major manufacturer of space and satellite equipment and technology. Rockwell filed comments in support of expanding the 76 - 77 GHz frequency band proposed by

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General Motors in its Petition for Rulemaking to include additional spectrum to allow greater flexibility in designing and building vehicle radar systems. Rockwell's comments in the current proceeding are limited to questions regarding the allocation of licensed service in the 40.5 - 42.5 GHz band.

In CC Docket 92-297, the Commission proposed to license Local Multipoint Distribution Service ("LMDS"), a fixed terrestrial service, in the 27.5 - 29.5 GHz band ("the 28 GHz band"). Subsequently, the Commission established a negotiated rulemaking committee to address interference problems between LMDS and Fixed Satellite Services ("FSS"). FSS shares a co-primary United States allocation in the 28 GHz band with the fixed and mobile services. Despite the diligent efforts of both the LMDS and FSS proponents throughout the deliberations of the Negotiated Rulemaking Committee in CC Docket 92-297, the participants were not able to reach a viable comprehensive sharing solution.<sup>1</sup> The proceeding appears to have reached an impasse. The Commission's NPRM in 94-124 presents an opportunity to resolve the spectrum conflict in the 28 GHz band by proposing to allocate the 40.5 - 42.5 GHz band to licensed services.

In the subject NPRM, the Commission proposes to allocate several bands above 40 GHz, including the 40.5 - 42.5 GHz band, to "Licensed Millimeter Wave Service" ("LMWS"). Further, the NPRM proposed to model the rules for LMWS on those proposed for LMDS in CC Docket 92-297. In order to quickly resolve the interference problems between LMDS and FSS in the 28 GHz band, Rockwell urges the Commission to license LMDS as a class of LMWS in the 40.5 - 42.5 GHz band or allocate the 40.5 - 42.5 GHz band directly to LMDS using the rules proposed in CC Docket 92-297. Expanded use of the 28 GHz band by FSS providers could then be possible without harmful interference, allowing the coexistence of LMDS and FSS and the resulting benefit to the American public.

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<sup>1</sup>See the Conclusions of the *Report to the LMDS/FSS 28 GHz band Negotiated Rulemaking Committee*, 9/23/94, pages 85 - 90.

## DISCUSSION

Allocating LMDS directly or licensing LMDS as a Class of LMWS in the 40.5 - 42.5 GHz band is the Commission's best opportunity to resolve the ongoing spectrum management conflict in the 28 GHz band. By moving LMDS to the 40.5 - 42.5 GHz band and reaffirming the 28 GHz band FSS allocation, the Commission will promote further development of the National/Global Information Infrastructure and foster interservice and intraservice competition in the communications marketplace. The alternative is to continue the protracted regulatory struggle over the 28 GHz band, thereby delaying and possibly, if neither service is allocated sufficient 28 GHz band spectrum, diminishing the benefits these two services can provide to the public.

Demand for the 28 GHz band spectrum continues to rise. Unhindered use of the 28 GHz band is essential for implementing competitive broadband satellite communications services as proposed by current applicants Teledesic and Hughes Spaceways. Other parties, including GE American Communications, have expressed interests in using the 28 GHz band for FSS. Further, Motorola, a Big LEO applicant has applied to use the band for Mobile Satellite Service (MSS) feeder links.<sup>2</sup> Requiring LMDS and FSS to share the 28 GHz band by allocating exclusive sub bands to each service could degrade potential competition among FSS applicants and eliminate the prospect of competition among LMDS systems as they are currently proposed<sup>3</sup> by limiting the amount of 28 band GHz spectrum available for each service. Under these circumstances, competition could only be introduced by sacrificing the capacities of the proposed broadband FSS systems and LMDS systems.

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<sup>2</sup>See the Minor Amendment to the Application of Motorola Satellite Communications, Inc. for Authority to Construct, Launch and Operate a Low Earth Orbit Satellite System in the 1616-1626 MHz Band (File Nos. 9DSS-P-91 (87): CSS-91-010) filed on November 15, 1994, Table R-8.

<sup>3</sup>In FCC 92-583, NPRM, Order, Tentative Decision and Order on Reconsideration, the Commission proposed to license LMDS in two 1000 MHz blocks in each geographic area.

Transferring the proposed LMDS allocation to the 40.5 - 42.5 GHz band and licensing FSS in the 28 GHz band are consistent with international allocations. In Europe, the functionally equivalent service of LMDS is being developed in the 40.5 - 42.5 GHz band.<sup>4</sup> Allocating LMDS in the 40.5 - 42.5 GHz band will give domestic LMDS providers and manufacturers the opportunity to export equipment and services. The 28 GHz band is allocated internationally for FSS and is currently being used by NASA and foreign FSS systems.<sup>5</sup> The worldwide FSS systems proposed by Teledesic and Hughes will be an integral and unique component of the National/Global Information Infrastructure delivering broadband, high data rate services to remote and unserved areas of the United States and other nations around the world.

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<sup>4</sup>The European designation is Multipoint Video Distribution Service (MVDS).

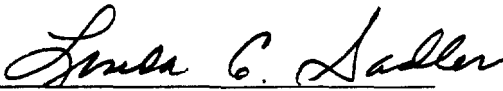
<sup>5</sup>NASA is currently operating the Advanced Communications Technology Satellite ("ACTS") in the 28 GHz band. Internationally, FSS is deployed in the 28 GHz band by the Italian "Italsat" and the Japanese "CS-3" and "Superbird".

## CONCLUSION

Designating the 40.5 - 42.5 GHz band for LMDS, either directly or as a class of LMWS, will allow the fullest possible implementation of currently proposed LMDS systems and competitive FSS global broadband satellite systems. Rockwell urges the Commission to designate the 40.5 - 42.5 GHz band for LMDS in order to optimize the public benefits of both FSS and LMDS.

Respectfully Submitted,

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